

apply an interpolation function to the sampled, filtered, audio signal to find values between a last point and a current point; and

determine a difference between the sampled, filtered, audio signal and the audio signal.

16. A method for processing an audio signal, the method comprising:

receiving the audio signal from a hearing aid microphone;

filtering the audio signal to remove audio features resulting in a modified audio signal;

identify a phoneme in the audio signal;

replace the identified phoneme in the audio signal; and

transmit the modified audio signal to a hearing aid speaker.

17. The method according to claim **16**, further comprising:

monitoring the audio signal and any background noise; and

providing feedback to a broadcast method; and

enhancing the audio signal; and

providing information to a classification method.

18. The method of claim **16**, further comprising transmitting a time slot and the identified phoneme to for replacement.

19. The method of claim **16**, further comprising determining whether the identified phoneme in the audio signal is a replaceable phoneme and, if the identified phoneme in the audio signal is a replaceable phoneme, replacing the identified phoneme in the modified audio signal with a replacement signal.

20. The method of claim **16**, further comprising:

processing the audio signal and finding a maxima and a minima of the audio signal;

passing the maxima to a high-pass filter;

filtering the maxima using a high pass filter to produce a filtered signal;

sampling the filtered signal;

applying an interpolation function to the sampled, filtered, signal to find values between a last point and a current point; and

determining the difference between the sampled, filtered, signal and the audio signal.

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